

What is claimed is:

1. A video telephone integrating public-switch telephone network (PSTN) and asymmetric digital subscriber line (ADSL), comprising:
 - 5 telephones operating with PSTN systems, wherein each telephone has basic analog audio transmission lines, a handset for receiving and sending audio, and a dialing assembly;
 - 10 a control module unit connected with communication lines of the telephone for forming audio transmissions of the PSTN telephones, and for sending a signal for commanding an ADSL module unit to dial-up to the Internet at activation of the telephone;
 - 15 an ADSL module unit connected with PSTN lines; and for dialing-up to the Internet after being activated by the received signal from the control module unit, and for further developing digital signal transmissions between a receiving party and a calling party; and
 - 20 an image access and display unit connected with the ADSL module unit; and having an image sensor and a display device, wherein the images sensor acquires video signals of telephone users and transmits the video signals to the receiving party and the calling party at a remote end, and the display device displays the video signals sent by the receiving party and the calling party at the remote ends;

wherein

the video telephone is directly connected with PSTN lines, and under circumstances that a receiving party and a calling party are simultaneously using the video telephone, when a receiving party

- 5 user dials telephone number of the receiving party using the handset of the video telephone, the control module unit is activated to send a signal; the signal commands the ADSL module unit to dial-up to the Internet, and an Internet protocol A is obtained; at an instant that the control module unit of the video telephone of the calling party
- 10 receives ringing signals of the calling party and becomes activated after a user picks up the handset, another signal is sent to command the ADSL module unit to dial-up to the Internet and to further obtain another Internet protocol B; via the PSTN lines, the Internet protocol A or B is sent to the control module unit of the receiving party or the
- 15 calling party; for both the receiving party and the calling party, linkage is performed via the Internet using the Internet protocols send by the PSTN, and video data are bi-directionally transmitted and received between the calling party and the receiving party; and hence common telephone audio transmission functions are accomplished by the
- 20 PSTN, and at the same time, bi-directional video signal transmissions

are also achieved between the receiving party and the calling party by transmitting video data using the high frequency band of the ADSL.

2. The video telephone integrating PSTN and ADSL in accordance with claim 1, further comprising a characteristic that, the PSTN may be

5 employed for establishing an initial connection, and the Internet is then used for transmitting audio and digital video information between the receiving party and the calling party.

3. The video telephone integrating PSTN and ADSL in accordance with claim 2, wherein, after having established a connection with the

10 Internet, the PSTN connection is disconnected, and digital information is preferably transmitted via the Internet.

4. The video telephone integrating PSTN and ADSL in accordance with claim 2, wherein, through a connection between two telephones and

established by the PSTN, Internet protocols and port addresses are

15 transmitted in any form via the PSTN, including those of a receiving party to a calling party, and those of a calling party to a receiving party;

and during transmissions via the Internet, the PSTN lines are disconnected or left connected.

5. The video telephone integrating PSTN and ADSL in accordance with

20 claim 1, wherein the image sensor and the display device are

preferably devices capable of direct digital signal transmissions.

6. The video telephone integrating PSTN and ADSL in accordance with
claim 5, wherein the display device is a liquid crystal display (LCD) or
any other displaying devices that directly display digital image signals
- 5 received.
7. The video telephone integrating PSTN and ADSL in accordance with
claim 5, wherein the image sensor is a digital image sensor made of a
charge coupled device (CCD).
8. The video telephone integrating PSTN and ADSL in accordance with
10 claim 5, wherein the image sensor is a digital image sensor made of a
complementary metal oxide semiconductor (CMOS) device.